

## 12 ■ *Information and communications technologies*

Zakes Langa

The Internet and other forms of communications technology are altering the way in which information flows, ideas spread and commerce is conducted. The revolution caused by changes in communications technology is likely to affect people and localities in fundamentally different ways. Whereas some people will no doubt benefit from this, others are likely to continue to be banished to the periphery of society. (Khosa, 2000.)

It is in light of the statement above that we must examine the data collected in this survey to find out whether new information and communications technologies (ICTs) are indeed changing people's fortunes differently. Six questions informed this analysis; called 'Communication Index Questions', they are listed below:

### **Communication Index Questions**

1. Do you read a daily newspaper regularly, that is, at least four out of six issues a week?
2. Could you estimate how many hours on an average working day, that is, from Monday to Friday, you spend watching TV?
3. Could you estimate how many hours on an average working day, that is, from Monday to Friday, you spend listening to the radio?
4. Do you have a working telephone in your home?
5. Do you personally have a cell phone for personal or business use?
6. Do you have access to the Internet?

Before the issue of information technologies is addressed, however, we first have to speak about what the 'older forms' of technology mean and how they are similar to and/or different from the 'newer forms'. On this topic, there are two

competing arguments. Some contend that there is not much difference between the older forms of media (like radio and television) and newer forms (like computers and the Internet). On the other hand, newer forms of media have been said to be different from the old because they cannot be lumped together with what has been traditionally referred to as 'mass media'. Many argue that newer technology is different because of its ability to combine print, sound, and vision in new ways (as with the Internet), rather than separately, as with newspapers, radio or television. In other words, technological convergence deems newer technologies different from earlier media forms.

### *Access to information and communications technologies*

The data gathered shows a fairly obvious relationship, in which respondents had proportionally greater access to the radio, meaning that more respondents had access to this type of medium than any other, followed by television. Proportionally, only a minority of people had access to the computer, while the Internet was the most inaccessible medium. Table 12.1 summarises these results in order from most accessible to least.

*Table 12.1* Access to information and communications technologies (%)

	Radio	TV	Newspaper	Phone	Cell phone	Computer	Internet
Yes	86	61	39	27	22	10	7
No	14	39	61	73	78	90	93

### *Access to communications technologies considering other factors*

Technological access is largely based on factors like income, the area where an individual lives, race, educational qualification and other contextual factors. Not surprisingly, Figure 12.1 illustrates that people with a higher monthly income tend to have more access to communications technologies than people with lower incomes. While nearly an equal number of respondents indicated having access to the radio (and, to a lesser degree, television), the disparities in income are striking in terms of computer and Internet access. Significantly, although nearly an equal number of middle and upper income respondents have access to the telephone, these numbers are much smaller for the two lower income groups.

Figure 12.1 Access to communications technologies by monthly income

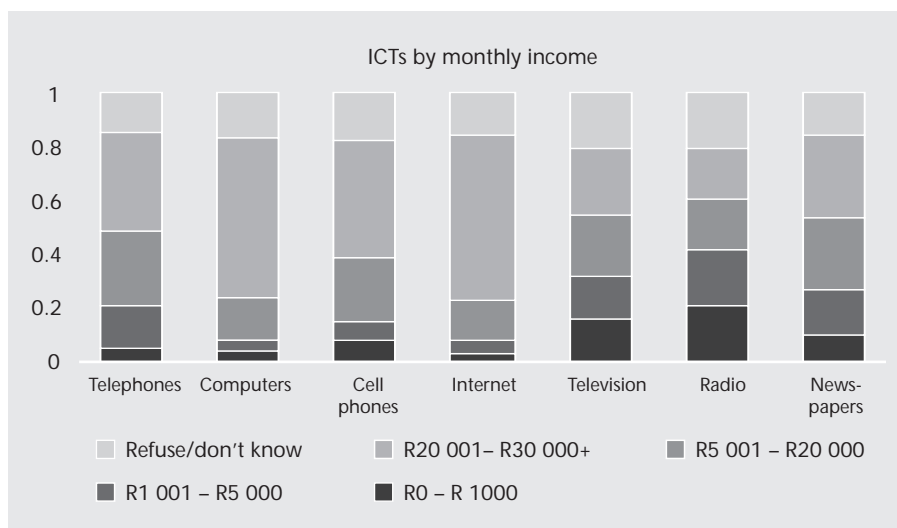


Table 12.2 shows how technologies are distributed between the metropolitan, urban and rural areas. Again, while there is an equal distribution of access to the radio, computer and television, access is much more concentrated in metropolitan areas.

Table 12.2 Access to communications technologies by area type

Technology	Metropolitan	Urban	Rural
Television	89	81	46
Radio	82	89	87
Telephone	51	31	10
Computer	18	12	3
Cell phone	32	28	13
Internet	13	10	2

Evidently, newer types of technologies like computers, cell phones and the Internet seem to have had little penetration in the rural areas. For example, computer access in the rural areas (3%) is only a quarter of that of urban areas

(12%) and only one-sixth of that of the metropolitan areas. These figures provide persuasive evidence that a digital divide not only characterises developed and developing countries, but there is also a geographic stratification within developing countries themselves. Figure 12.2 further depicts this distribution.

Figure 12.2 Access to communications technologies by area type

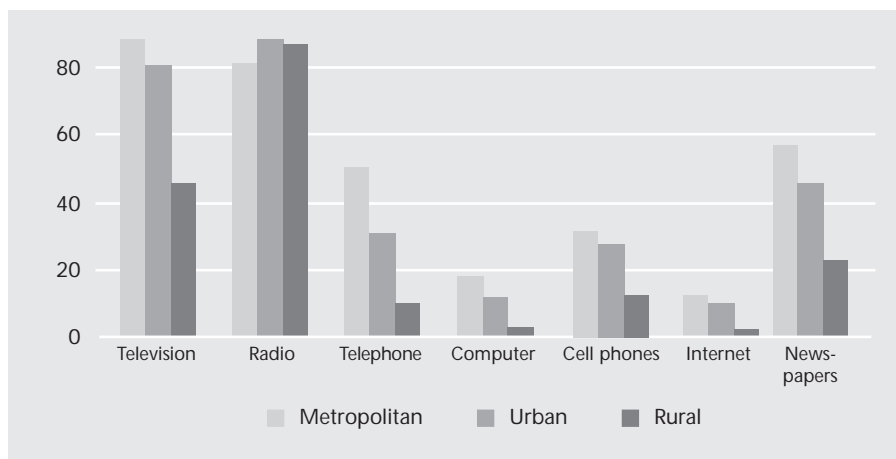


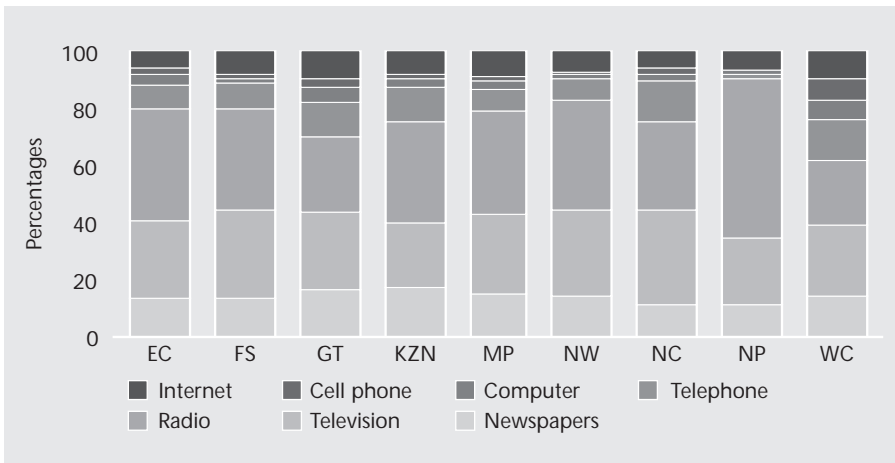
Table 12.3 Access to communications technologies by race

Technology	African	Coloured	Indian	White
Television	60	88	93	96
Radio	88	83	66	79
Telephone	17	42	70	73
Computer	4	7	20	47
Cell phone	15	18	27	69
Internet	4	5	10	31

From Table 12.3 it is evident that the higher socio-economic groups closely coincide with the apartheid-era racial classification system as well. While radio and television are again the two media most equitably distributed, access to telephones and computers is remarkably higher, particularly for whites, followed by Indians, coloureds and Africans.

Furthermore, with newer forms of technology like the computer, cell phones and the Internet, having little or no education significantly affects one's chances of having access to more advanced technologies. Though not depicted here, data show that only 10% or less of the people with little or no formal education said that they had either cell phones or computers. Indeed, compared to the Internet (which less than 5% of less educated individuals have access to), cell phones are the only medium that even measured an access rate as high as 10%.

Figure 12.3 Communications technologies by provinces



In terms of print media, Figure 12.3 shows that Gauteng has the greatest proportion of newspaper readers (54,2%) while the Western Cape has the greatest proportion of people watching television (88,1%) and the Northern Province the greatest number who listen to the radio (92,4%). In line with the trends of the previous data, the Northern Province, which is one of the poorest in South Africa, also has the smallest percentage of television audiences, computer and Internet users, or phone use.

### *Radio station preferences and time spent*

On a different note and as a subset of this data, respondents were also asked to specify which radio stations they listened to most often. They were asked to name no more than four stations. The most frequently mentioned stations were the

following: Ukhozi-FM (26%), Umhlobo Wenene (Xhosa Stereo, mentioned by 18% of respondents), Metro-FM (13%) and Thobela-FM (11%).

Table 12.4 shows how many hours respondents spend listening to the radio or watching television. On average, people spend more than four hours per day either listening to the radio or watching television. Proportionally, more respondents reported spending over four hours daily listening to the radio (41%) than those who reported spending the same time watching television (20,5%). There were also significantly more people who reported that they never watched television than those who reported that they never listened to the radio.

Table 12.4 Hours spent watching television/listening to the radio per day (%)

	Less than one hour	1–2 hours	2–3 hours	3–4 hours	More than 4 hours	Never
Radio	9,8	11,9	10,8	11,1	41,2	15,2
TV	7,4	16,6	12,3	11,0	20,5	32,2

Based on data summarised in Table 12.5, it appears that SABC 1 is the most watched (i.e. more than four hours a week) programme, followed by SABC 2.

Table 12.5 Television programmes that are 'regularly watched'

TV programmes	Yes	No
SABC 1	77,9	22,1
SABC 2	56,8	43,2
SABC 3	41,6	58,4
E-TV	44,0	56,0
Bop-TV	4,8	95,2
M-Net	12,1	87,9
DSTV-movies	4,1	95,9
DSTV-sport	4,3	95,7
DSTV-travel	1,9	98,1
DSTV-discovery	3,0	97,0
DSTV-kyknet	1,6	98,4
DSTV-other	2,2	97,8

## *Conclusion*

The results of this survey would indicate that the radio is still the most popular and accessible medium amongst the majority of South Africans. Television is the second most common form of technology, although newspapers also have a fairly equitable distribution.

In general, data strongly shows that people who earn higher incomes (especially those earning more than R20 000 monthly) have access to more communication technologies, particularly cell phones, computers, and the Internet. Not surprisingly, it is largely metropolitan residents who have more access to a broader array of technological media, though that in itself is not evidence that city dwellers actually use such equipment.

The access and distribution of technology is also largely defined by the racial categories of apartheid. Therefore, low-income earners with the least access to technological media are predominantly Africans, with access improving progressively for coloureds, Indians and whites. This data is also in line with educational achievements, since respondents with a higher educational qualification also indicate a greater knowledge and more frequent use of sophisticated technology. Interestingly, different rates of access for men as compared to women were not significant in this data.

Thus, as it has historically been, radio remains the most common technological medium, not least because of its affordability and the range of reception it affords. The radio is most accessible to low-income earners and, along with the newspaper, seems to be the most evenly distributed throughout South Africa's population groups. Conversely, newer technologies still remain in the hands of the wealthy and access to basic communication devices like the telephone still remains limited for poorer citizens, particularly those living in rural areas. As such, we cannot argue about the benefits of new information and communications technologies without also realising the effect that large income disparities have on the access to these mediums. If left unchecked, a digital divide will further split the educational levels and employment qualifications of an already economically stratified society.